DOCUMENT RESUME

ED 065 690 VT 016 139

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TITLE A Comprehensive Career Education Model: A Bridge Between School and Work.
PUB DATE 72
NOTE 17p.; Presentation to Southwide Research Coordinating Council (Clearwater, Fla., May 16, 1972)

EDRS PRICE MF-$0.65 HC-$3.29
DESCRIPTORS *Career Education; *Developmental Programs; *Educational Objectives; Glossaries; Integrated Curriculum; *Models; Occupational Clusters; Relevance (Education); Speeches
IDENTIFIERS CCEM; Comprehensive Career Education Model

ABSTRACT

The Center for Vocational and Technical Education at Ohio State University is working on a major modification of the current education system, concentrating on the way in which youth move from school to work. Known as the school-based Comprehensive Career Education Model (CCEM), the project involves the engineering, testing, and installation in six school districts of an innovative educational system. During the preliminary months, two significant milestones were reached. First, career education was defined in terms of a detailed matrix or framework containing a grade-by-grade, cumulative summation of goals necessary to achieve career education. Second, curriculum treatment units were identified and modified to deliver a substantial portion of the project objectives. These units will be installed in the six pilot sites in September 1972. Also during this period steps were taken to: (1) identify occupational clusters for use with the career education model, (2) insure the external evolution of CCEM, and (3) conduct a national search for non-commercial materials. (JS)

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# A COMPREHENSIVE CAREER EDUCATION MODEL: A BRIDGE BETWEEN SCHOOL AND WORK

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Presentation made to

Southwide Research Coordinating Council
Clearwater, Florida
May 16, 1972

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A COMPREHENSIVE CAREER EDUCATION MODEL:
A BRIDGE BETWEEN SCHOOL AND WORK

## Introduction

"There is something fundamentally wrong with the way in which youth move from school to work," states the National Committee on Employment of Youth; and I think they are correct. The teenage unemployment rate in this country--which ranges between 15 to 20 percent--is the highest of any western nation. For black teenagers, unemployment runs as high as one out of three; and in the inner-city ghettos, it is closer to one out of two.

"Nearly 2.5 million students leave the formal education system of the United States each year without adequate preparation for careers," states the U.S. Office of Education. In 1970-71, for example, 850,000 elementary and secondary school students became droputs. Many found school irrelevant. They obviously face poorer job prospects than those who graduate.

In the same year 750,000 general curriculum high school graduates did not attend college and were also ill prepared for jobs. The U. S. Commissioner of Education, Dr. Sidney P. Marland, Jr., states that this curriculum is "neither fish nor fowl, neither truly vocational nor truly academic. . . I suggest we get rid of it."

Also in the same year, 850,000 high school students who entered college in 1967 did not complete the baccalaureate or an organized occupational program. They aspired, but did not achieve a degree. They fell out between the cracks in the system.

The Federal Government is required to spend close to one billion dollars per year in manpower programs (such as the Job Corps and the Neighborhood Youth Corps) for youth unable to find their place in the labor market.

For the first time in the nation's history, substantial number of youth are challenging the work ethic. They are role-oriented rather than goal-oriented and some are even withdrawing from work as a life activity. But the major manifestation is the new job behavior, particularly on the assembly-line in mass production industries, where resistance to the work environment is prevalent.

There is nothing wrong with a trial-and-error experimentation with jobs upon leaving school, which has been characteristic of American youth in modern times, but today's floundering goes beyond healthy practice and gives cause for grave concern. Many people have pointed to what they consider to be the problems. The National Advisory Committee on Vocational Education has stated:

> At the very heart of the problem is a national attitude that says vocational education is designed for somebody else's children. This attitude is shared by businessmen, labor leaders, administrators, teachers, parents, students. We are all guilty. We have promoted the idea that the only good education is an education capped by four years of college. This idea, transmitted by our values, our aspirations and our silent support, is snobbish, undemocratic, and a revelation of why schools fail so many students.

The National Committee for the Employment of Youth states:

> Ours is a front-end loaded educational system. All the education comes in the beginning, and this is supposed to equip a person for work for the rest of his life. There is a linear lockstep that structures 12 or 16 or 20 years of school in the beginning and then no more school but only work. At school youth is taught not only what he or she can use immediately upon being employed but also that knowledge and skill which cannot be used, in many cases, until years later at the height of one's career. No effort is made to space out education to such periods as are more timely for its use. The inflexible and artificial separation of school from work prevents an orderly and logical sequence of learning and experience.

Others have pointed out that the schools are dysfunctional or irrelevant to the real world, and they "turn off" even the eager student. For many of

the dropouts, the decision to leave school is an appropriate and intelligent response to an untenable situation. The inability of schools to provide dropouts with a viable second chance is a major reason for the establishment and expansion of out-of-school youth, manpower programs.

Not all the problems can be blamed on the schools, however. Studies reveal that employers, especially those in large-scale industries, are usually unwilling to hire youth under 21 years; and they enforce a variety of arbitrary hiring requirements. Frequently, they hire youth only as a last resort--when older workers are not available or for jobs that older workers are unwilling to accept. When they do employ youth, it is often for the least attractive and most menial jobs, thus accentuating a tendency toward high job turnover. Many unions support employer practices out of concern for youth competition with their adult members over job opportunities and wage scales.

Compounding the institutional deficiencies is the effect of contemporary youth culture. Its rejection of much of adult society and its values further weakens the already tenuous hold of these institutions on an increasing number of youth.

At the Center for Vocational and Technical Education at Ohio State University we are working on a major modification of our current education system which deals with what is fundamentally wrong with the way in which youth move from school to work. We believe that it will help make school curricula realistic, unify fragmented programs, provide useful education for all students, whether they enter the world of work or continue to prepare for collegiate careers, and build a bridge between school and work for both youth and adults. We call it the Comprehensive Career Education Model and I would like to tell you about it.

## CCEM - One of Four Models

The Commissioner is developing career education in four different models. At present, the Comprehensive Career Education Model (CCEM) has progressed the furthest in its development and implementation. CCEM is the school-based model which is being developed in six local school districts: Mesa, Arizona; Los Angeles, California; Jefferson County, Colorado; Atlanta, Georgia; Pontiac, Michigan; and Hackensack, New Jersey. Our contract with the USOE specifies that we are . . .

### PROGRAM REQUIREMENTS

To develop an educational program for grades K through 12 around the career development of each student which:

(1) Restructures the entire educational program around the real life developmental needs

(2) Integrates the academic knowledges and skills with occupational training

(3) Assure that each exiting student will be prepared for further career development and for immediate employment

(4) Provides for each student a program relevant to his becoming a self-fulfilled, productive, and contributing citizen

(5) Incorporates community resources and non-school educational opportunities

The Center has also been charged by USOE with the task of assuring that this is not "just another curriculum development program." This responsibility calls for a research and engineering effort. Utilizing research techniques, the general concept of comprehensive career education and each of its elements will be stated as hypotheses and tested for their ability to achieve desired goals. Hypothesis testing must take place on several levels. On

the level of a local education agency (LEA), it will be necessary to test the instructional programs to see whether they achieve the specified objectives. On a more general level, it will be necessary to determine if the specific objectives contribute to the realization of desired program outcomes. The engineering aspect of the task is evident in the construction of a multitude of components and their assembly into an operational prototype.

## Target Dates

For comprehensive career education to become a reality in the near future, the following target dates have been established:

TARGET DATES

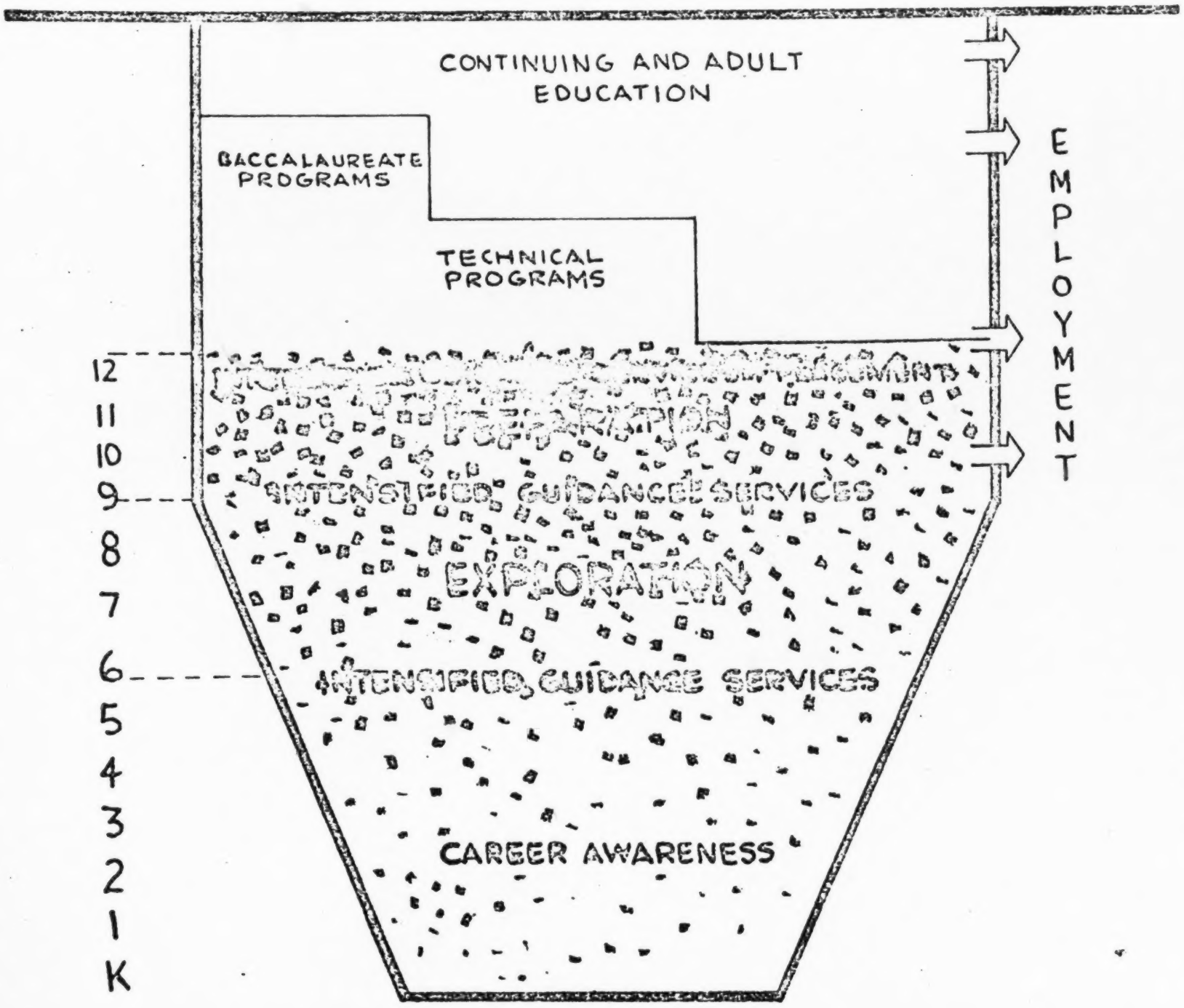
Engineer, test and install in six school districts a Comprehensive Career Education Model beginning in September 1972

To refine the CCEM into an operational prototype ready for national diffusion by December 31, 1973

To plan for long range development of CCEM by September 1, 1974

To test and validate the CCEM and provide a complete report and installation manual for national diffusion by December 31, 1979

# COMPREHENSIVE CAREER EDUCATION MODEL



Perhaps this is the best transparency to provide an overview of comprehensive career education. Career education is a comprehensive educational program focused on careers, which begins in grade 1 or earlier and continues through the adult years. In elementary school, students are introduced to the world of work, first, through its simple division into the production of goods and services, and then through its further differentiation into many occupational clusters. In junior high school, students will begin to explore several specific processes through "hands-on" experiences and field observation, as well as classroom instruction. In senior high school, they will explore in more detail selected occupational areas. And choose one of three options--intensive job preparation for entry into the world of work immediately upon leaving high school, preparation for post-secondary occupational education, or preparation for a four-year college.

Those students preparing for post-secondary occupational education or a four-year college will continue to be provided with experiences in occupational clusters, including work experience where possible, and their academic subjects will be related to the professional area for which they are preparing. Students engaged in specialized job preparation will be provided with basic academic skills essential for continuing their education, as well as occupational skills. Consequently, every student will leave the system with at least entry-level job skills and a facility in basic academic subjects which will enable them to continue their education.

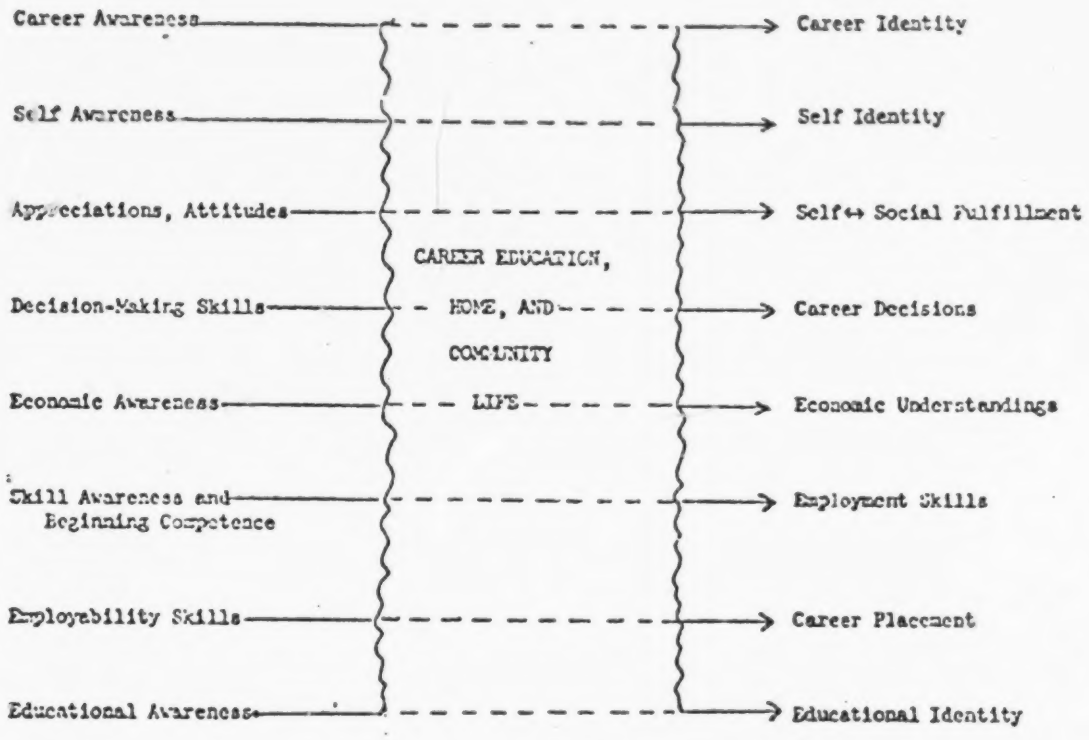
## The Matrix

The CCEM staff at The Center began by looking for a device or tool to guide us in determining whether an educational program was related to the career development theme. Without a clear frame of reference to guide us, we

had no basis for accepting some items as contributing to the goals of career education and rejecting other items.

The device that we eventually adopted began to take shape when we asked ourselves, "What are the basic elements of career education?" and "What are the essential outcomes of career education?" The identification and definition of the elements and outcomes used by The Center were achieved by examining and integrating the work of many people in the fields of human growth and development, vocational guidance, and curriculum development.

ELEMENTS OF CAREER EDUCATION




This transparency identifies the "necessary and sufficient" elements for weaving comprehensive career education into a sound basic program in a local educational agency. The elements, which can be thought of as themes, are listed on the left side of this diagram. These themes, after treatment in a career education program, become the outcomes (terminal characteristics) listed on the right side.

A brief glossary of these terms is provided in this transparency.

GLOSSARY

Career Awareness
Knowledge of the total spectrum of careers

Career Identity
Role or roles within the world of work

Self Awareness
Knowledge of the components that make up self

Self Identity
Know himself--consistent value system

Appreciations, Attitudes
Life roles--feeling toward self and others in respect to society and economics

Self Social Fulfillment
Active work role satisfying work role

Decision-making Skills
Applying information to rational processes to real decisions

Career Decisions
Career direction, has a plan for career development

Economic Awareness
Perceives processes in production, distribution and consumption

Economic Understanding
Solve personal and social problems in an economic environment

Skill Awareness and Beginning Competence
Skills--ways in which man extends his behaviors

Employment Skills
Competence in performance of job-related tasks

Employability Skills
Social and communication skills appropriate to career placement

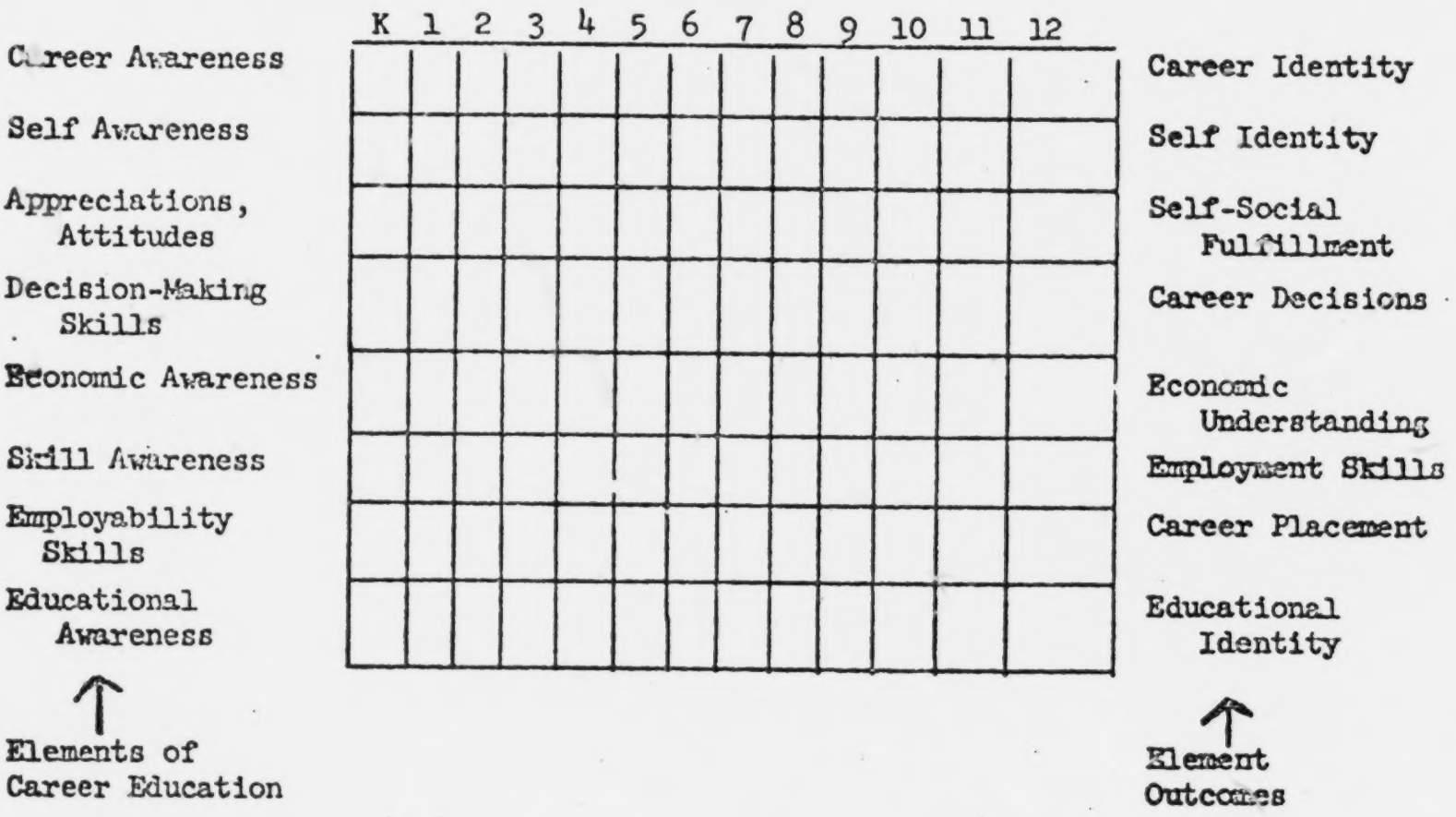
Career Placement
Employed in line with career development plan

Educational Awareness
Perceives relationship between education and life roles

Educational Identity
Ability to select educational avenues to develop career plans

The Matrix is completed by placing a grid representing the curriculum of the public school between the elements and the outcomes. By creating and utilizing this basic matrix, we have developed the goals and the objectives which will ultimately define career education for the Comprehensive Career Education Model.

CCE MATRIX




## Subcontracts

The critical constraint of time for developing an experimental CCEM and installing it by September 1972 necessitated the use of outside specialists for certain essential research and evaluation procedures. Three subcontracts were awarded by CVTE on November 1, 1971, for the following purposes: (1) validation

of an occupational clustering system; (2) external evaluation of CCEM; and (3) a national search, appraisal, and classification of existing career education materials.

Validation of Occupational Clusters

During the preliminary development of the Matrix, the CVTE/CCEM staff concluded that a clustering system was needed to identify and validate appropriate career groupings for career awareness units in grades K-6, for occupational exploration units in grades 7-9, and for career skill development in grades 10-12. The contract was awarded to Human Resources Research Organization (HumRRO) of Alexandria, Virginia.

HumRRO approached the project by reviewing available research materials and literature on clustering systems to determine if an existing system would be useful for CCEM. These clustering systems were found to be of three main types: descriptive, sociological-psychological, and task-analytic. HumRRO determined that none of the existing systems adequately met the CCEM criteria: (1) to include a comprehensive list of existing jobs; (2) to be flexible enough to fit into the K-12 curriculum; and (3) to show clear and specific advantages over other clustering systems.

The HumRRO report proposed adopting the following clustering system designed to supply the student with information about the world of work, to help him choose a career compatible with his interests and abilities, and to provide models for shaping instructional objectives and learning experiences:

## CCEM CLUSTERS

| K-3 | 4-6 | 7-9 | 10-12 |
|---|---|---|---|
| Goods | Industry | Natural Resources | |
| | | Construction | |
| | | Manufacturing | |
| Services | Commerce | Transportation & Communication | |
| | | Trade & Finance | |
| | Social Science | Government | |
| | | Education | |
| | | Health & Welfare | |
| | Services | Personal Services | |
| | | Product Services | |
| | Arts | Arts & Humanities | |
| | | Recreation & Entertainment | |

12 Clusters
(209 Industries from DOT)

In grades K-3, career awareness will be developed by simply dividing the world of work into occupations which produce goods and those which produce services. This simple division will be expanded to five clusters directly related to the nine main categories of the DOT occupational groupings in grades 4-6. In grades 7-9, twelve clusters will be used for career exploration. These 12 clusters, which can be divided into the 83 occupational subgroupings of the DOT, will also be used in grades 10-12 for career preparation. At that level, the clusters can be expanded to the 229 industries listed in the DOT.

External Evaluation

The need for an objective, step-by-step evaluation of the progress and performance of CCEM became apparent early in the development of the CCEM. The Institute for Educational Development, an affiliate of Educational Testing Service (ETS), was appointed as CCEM evaluator.

The summative (external) evaluator will provide a multidimensional assessment of the overall progress of the project, taking into consideration social and geographical variables affecting the success of the CCEM. IED is charged with accomplishing the following four tasks: (1) monitor the performance of the CVTE/CCEM project staff; (2) evaluate the performance of the instructional staff in the six cooperating LEAs; (3) characterize the six LEAs in terms that will allow other LEAs to determine whether they are similar enough to consider adopting all or a portion of CCEM for their local use; and (4) determine the amount of pupil growth relevant to achieving the CCEM objectives.

National Search

To facilitate the development of appropriate treatment units, The Center contracted for a national search of existing non-commercial materials relevant to career education. Palo Alto Educational System, Inc. (PAES) was awarded the contract.

Three major sources were tapped by PAES--USOE-funded exemplary projects, state departments of education, and local school districts. PAES evaluated all identified units, as well as the "in place" units from the six participating LEAs of CCEM, to determine whether they could achieve the goals and objectives specified in the Matrix and transmitted all units to CCEM with accompanying analytical data.

## Selection of Treatment Units

Upon completion of the CCEM Matrix and the national search of career education treatment units, the next large-scale task was the selection of the treatment units that, with refinement and modification, would achieve the Matrix goals and performance objectives. The treatment units chosen will be installed in the six LEAs in September 1972, as part of the Comprehensive Career Education Model.

This task proved to be very time consuming and exhaustive. Without going into the details of the selection process, let me simply say that of the original 915 units from the national search and the participating LEAs, approximately 140 have been selected for modification and pilot testing.

## State-of-the-Art

During the preliminary "start up" months of the project, two significant milestones had been reached. The first is the defining of career education in terms of a detailed matrix or framework containing a grade-by-grade, cumulative summation of goals necessary to achieve career education. Second, curriculum treatment units have been identified and modified to deliver a substantial portion of the project objectives. However, in the screening and

analysis of these treatment units, we have determined that the units will need a significant amount of revision if they are to achieve career education goals and be transportable to other local educational agencies.

One hundred and thirty (130) units are currently under contract to our LEAs for revision and validation. We expect that 42 will be installable by fall of 1972. The balance of the necessary treatment units required to complete the model must be refined or developed and installed the following year. This does not mean that transportable program units will not be available by December, 1973. It means, however, that a total Model with necessary support systems cannot be developed, tested, validated, and installed within the fiscal year of 1972-73.

Although we have more work to do than most people thought we would at the beginning of the project, nobody is suggesting that we abort the program. In fact, the reverse is true. Our experience has shown us and the U.S. Office of Education that we are challenged by one of the most exciting frontiers in educational progress.

## Conclusion

I don't know how you feel about the career education movement, but we who are involved in the Comprehensive Career Education Model believe that we have a rare opportunity to make a significant impact upon American education. Let me repeat what we are attempting to do. Aren't these the goals vocational educators have been working toward for many years? We are going to:

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(4) Provides for each student a program relevant to his becoming a self-fulfilled, productive, and contributing citizen

(5) Incorporates community resources and non-school educational opportunities

With these goals guiding our mission, we think that we can rectify much of what is fundamentally wrong with the way youth move from school to work.